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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/527,344

03/10/2005

Yong Chang

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EXAMINER

RUTKOWSKI, JEFFREY M

ART UNIT

PAPER NUMBER

2619

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/527,344	Applicant(s) CHANG, YONG	
	Examiner JEFFREY M. RUTKOWSKI	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. **Claims 1, 4, 6, 8, 11, 13, 16, 19 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Demetrescu et al. (US Pg Pub 2001/0053971), hereinafter referred to as Demetrescu, in view of Nagata (US Pg Pub 2004/0203448).

5. For **claims 1, 8 and 16**, Demetrescu discloses a transceiver, which can be implemented in a base station [0044], uses signal strength (predetermined criterion) to determine whether or not a change in code mode (convert the mode of the voice signal) of a transmitter is justified [0041].

If it is determined that a change in mode is needed, the transceiver is used to transmit mode conversion requests or mode conversion command [0044].

6. Demetrescu discloses codec mode requests and commands are sent only when a change in codec is desired, which suggests the use of a request-response scheme [0048,0060].

Demetrescu does not disclose receiving a response signal that is used to satisfy a codec mode conversion request. Nagata discloses a voice coding mode request-response scheme where an acknowledgement (ACK) is sent, by a Media GateWay (MGW), in response to a request for a change in voice coding mode [0083-0088]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use acknowledgements in Demetrescu's invention to allow the proper coding mode to be used according to the current network conditions [Nagata, 0083].

7. For **claims 4, 11 and 19**, Demetrescu discloses the mode conversion decision is based on when the signal strength is above or below a certain threshold (a predetermined time for determining a mode conversion) [0041].

8. For **claim 6**, Demetrescu discloses a criterion for mode conversion that is dependent upon the signal power (a power control status) at a base station [0041].

9. For **claims 13 and 21**, Demetrescu discloses a Radio Link Control/Media Access Control (RLC/MAC) header can contain a codec mode indication (identity of mode conversion request) and the mode conversion request or command [0053].

10. **Claims 2-3, 9-10 and 17-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Demetrescu in view of Nagata as applied to **claims 1, 8 and 16** above, and further in view of Doshi et al. (US Pat 5,729,536), hereinafter referred to as Doshi.

11. For **claims 2, 9 and 17**, Demetrescu discloses code mode requests and commands are sent during periods when there is speech and when there is no speech [0048-0049]. The combination of Demetrescu and Nagata does not disclose if in-band signaling is used. Doshi discloses an air interface that is used to carry in-band signaling information [col. 1 lines 41-55]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use an in-band signaling scheme in Demetrescu's invention to allow for interaction with legacy cellular systems [Doshi, col. 1 lines 5-10].

12. For **claims 3, 10 and 18**, Demetrescu discloses code mode requests and commands are sent during periods when there is speech and when there is no speech [0048-0049]. The combination of Demetrescu and Nagata does not disclose if out-of-band signaling is used. Doshi discloses an air interface that is used to carry out-of-band signaling information [col. 1 lines 41-55]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use an out-of-band signaling scheme in Demetrescu's invention to allow for interaction with legacy cellular systems [Doshi, col. 1 lines 5-10].

13. **Claims 5, 12 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Demetrescu in view of Nagata, as applied to **claims 1, 8 and 16 respectively** above, and further in view of Bienn et al. (US Pg Pub 2003/0169729), hereinafter referred to as Bienn.

14. For **claims 5, 12 and 20**, the combination of Demetrescu and Nagata do not disclose the use of a Mobile Switching Center emulator (MSCe). Bienn discloses a radio network that uses an MSCe [figure 1]. Figure 1 also shows an out-of-band signaling management scheme is used for communications between the different MSC emulators. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use an MSCe in Demetrescu's

invention to map routing information between packet-switched and circuit-switched data [**Bienn, 0021**].

15. **Claims 7, 15 and 23** are rejected under 35 U.S.C. 103 (a) as being unpatentable over Demetrescu in view of Nagata, as applied to **claims 1, 8 and 16 respectively** above, and further in view of Yallapragada et al. ("Increments in Voice Capacity and Impact on Voice Quality with New Vocoders in GSM and CDMA systems").

16. For **claims 7, 15 and 23**, the combination of Demetrescu and Nagata do not disclose the use of Selective Mode Vocoders (SMV). Yallapragada discloses an Selective Mode Vocoder that is used in a Code Division Multiple Access (CDMA) 2000 architecture [**page 103, section 5.0**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use an SMV vocoder in Demetrescu's invention to increase capacity and quality in the communications system [**Yallapragada, page 103, Section 5.0, 1st sentence**].

17. **Claims 14 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Demetrescu in view of Nagata, as applied to **claims 8 and 16 respectively** above, and further in view of Farley et al. (US Pg Pub 2002/0101839), hereinafter referred to as Farley.

For **claims 14 and 22**, the combination of Demetrescu and Nagata do not disclose the use of a Cyclic Redundancy Check (CRC). Farley discloses a CRC is used for error-checking purposes [**0104**]. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a CRC in Demetrescu's invention to make sure information received in the wireless network was not corrupted.

Response to Arguments

18. Applicant's arguments with respect to **claims 1-23** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215.

The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
07/12/2008

/Hassan Kizou/
Supervisory Patent Examiner, Art Unit 2619